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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,266	11/05/2001	Jayakumar Jayakumar	081862.P260	7694

7590 06/06/2006  
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EXAMINER

WONG, WARNER

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/992,266

Applicant(s)

JAYAKUMAR ET AL.

Examiner

Warner Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claim 20 is objected to because of the following informalities: The claim appears to depend on independent claim 17 versus claim 12 according to the description "generating secondary SDUs.." Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 6, 10, 11, 15, 16, 20, 21, 25, 26, 30, 31, 35, 36 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mauger (6,882,643) in view of Lundback (6,912,590).

**Regarding claims 1, 11, 21 and 31**, Mauger describes a method/system/router comprising: "generating an MPLS packet from the ATM packet, wherein the ATM packet comprises an ATM header" and "routing the MPLS packet over an MPLS network" (fig. 4, ATM over MPLS option 1, and col. 10, lines 57-60, 45-47 "MPLS network.. provides a tunneled transport capability over which the ATM service is provided transparently via ATM connection control..").

Mauger fails to show what Lundback describes as a related art for routers in IP networks, comprising: "receiving an AAL5 CPCS-SDU" and "encapsulating the AAL5-

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CPCS-SDU into AAL5 enhanced packet" (col. 2, lines 54-61, "To transport IP packets over ATM, the ATM Adaptation Layer 5 (AAL5) is often used.. Encapsulation of IP packets into AAL5 SDU is specified in the Internet Engineering Task Force (IETF) Request For Comment (RFC) number 1483", where IP packets are segmented into ATM payloads called AAL5 CPCS-SDU.)

It would have been obvious to one with ordinary skill in the art at the time of invention to specify the ATM technology of Lundback into include specifically the AAL5 support as in Mauger.

The motivation for combining the teaching is that is allows IP packets to be transported over ATM AAL5 sublayer (Lundback, col. 2, lines 54-61).

**Regarding claims 5, 10, 15, 20, 25, 30, 35 and 40,** Lundback describes receiving and generating ATM and Ethernet as secondary SDU of other layer 2 protocols (Lundback, col. 3, line 46-47 & 60, "The IP handler is capable of handling different types of IP interfaces.. IP links (e.g., sockets, ATM, and Ethernet)".

Mauger describes receiving and generating Frame Relay and SONET as secondary SDU of other layer 2 protocols ("col. 1, lines, 11-14 "two types of legacy telecommunications..first type is connection-oriented.., typically in TDM [SONET] frames", lines 41-52 "[MPLS] in the handling of certain services, particular for PSTN/ISDN, Leased-Line, Frame Relay, and ATM services.. A further object of the invention is to provide an improved arrangement and method for providing MPLS transport in a telecommunications network.")

Mauger fails to describe the other layer 2 protocol type of Ethernet.

Lundback describes receiving and generating ATM and Ethernet as secondary SDU of other layer 2 (Ethernet) protocol (Lundback, col. 3, line 46-47 & 60, "The IP handler is capable of handling different types of IP interfaces.. IP links (e.g., sockets, ATM, and Ethernet)").

It would have been obvious to one with ordinary skill in the art at the time of invention to include into Mauger's method which supports multiple layer 2 protocols the Ethernet protocol as that of Lundback.

The motivation for combining the teachings is that it provides the capability of handling different types of IP interfaces (Lundback, col. 3, lines 45-47).

**Regarding claims 6, 16, 26 and 36**, Mauger describes a method/system/router comprising: "receiving a MPLS packet" and "decapsulating the MPLS packet when the MPLS packet is an ATM (fig. 4, ATM over MPLS option 1, and col. 10, lines 57-60, 45-47 "MPLS network.. provides a tunneled transport capability over which the ATM service is provided transparently via ATM connection control..").

Mauger fails what Lundback describes as a related art for routers in IP networks, comprising: "producing an AAL5 CPCS-SDU from the AAL5 enhanced packet, wherein the AAL5 (enhanced) packet comprises an ATM header" (col. 2, lines 54-61, "To transport IP packets over ATM, the ATM Adaptation Layer 5 (AAL5) is often used.. Encapsulation of IP packets into AAL5 SDU is specified in the Internet Engineering Task Force (IETF) Request For Comment (RFC) number 1483", where IP packets are segmented into ATM payloads called AAL5 CPCS-SDU.)

It would have been obvious to one with ordinary skill in the art at the time of invention to incorporate into Mauger's method the ATM functionality in an IP network from Lundback.

The motivation for combining the teachings is that it provides the capability of handling different types of IP interfaces (Lundback, col. 3, lines 45-47).

4. Claims 2, 7, 12, 17, 22, 27, 32 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mauger and Lundback, and further in view of Rekhter (6,339,595).

**Regarding claims 2, 7, 12, 17, 22, 27, 32 and 37,** Mauger and Lundback describe the method as per claim 1, which comprises an AAL5 CPCS-SDU (segmented IP packet) and a control word (Access Control Field of an ATM header).

Mauger and Lundback fail to describe an AAL5 (enhanced) packet comprising an MPLS label stack.

Rekhter references a complementary internet draft which incorporates a MPLS label stack to the IP datagram (col. 39, lines 30-35, "Every LSR is capable of .. (b) adding a label stack to the datagram,"

It would have been obvious to one with ordinary skill in the art at the time of invention to add a MPLS label stack to the datagram as that of Rekhter to the transmission method used by the routers of Mauger and Lundback.

The motivation for combining the teaching is that "it specifies procedures which allow one to configure the network so that large datagrams from hosts which do not

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implement Path MTU Discovery get fragmented just once, when they are first labeled.”

(Rekhter, col. 38, lines 38-41).

**Regarding claims 3-4, 8-9, 13-14, 18-19, 23-24, 28-29, 33-34, and 38-39,**

Mauger and Lundback describe the method as per claims 2, 7, 12, 17, 22, 27, 32 and 37 respectively.

Mauger and Lundback fail to describe the routers being label switch routers or label edge routers.

Rekhter describes CE/PE-routers as being label edge routers (col. 2, 60-65) and P-routers as label switch/transit routers (LSR) (col. 2, 66-67).

It would have been obvious to one with ordinary skill in the art at the time of invention to specify the router types of CE/PE of Rekhter into the routers of the combined method of Mauger and Lundback.

The motivation for combining the teaching is that “So the customer enterprise does not really need to maintain a backbone router at each site; it just needs a router that attaches to one of the SP’s backbone routers.”, where a ‘router’ is a label edge router and a ‘backbone router’ is a label switch (Rekhter, col. 2, 47-49).

### ***Response to Arguments***

5. Applicant's arguments filed April 4, 2006 have been fully considered but they are not persuasive.

6. On page 11, lines 11-19, the applicant initially argues that the reference of Mauger describes the transmission of ATM AAL1/2 cells over a MPLS network, but fails

to specifically describe the use of AAL5 sublayer. Afterwards, the applicant argues the reference of Lundback describes the related use of ATM AAL5 cells for transmission, but not via a MPLS network. Hence, the applicant concluded that the references fails to describe the use of ATM AAL5 sublayer cells in transmission within a MPLS network. The examiner respectfully disagrees.

The examiner understood that such argument is of piecemeal analysis. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



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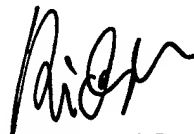
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Warner Wong whose telephone number is 571-272-8197. The examiner can normally be reached on 6:30AM - 3:00PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Warner Wong  
Examiner  
Art Unit 2616

WW



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SUPERVISORY PATENT EXAMINER